

**CLAIMS**

1. A method of routing a message, conveyed in stream through a point-to-point  
5 connection to a load-balancing element, to one of a plurality of available processing  
systems each connected to the load-balancing element by separate point-to-point  
connections, comprising at the load-balancing element:  
    extracting the message from the stream;  
    detecting in the extracted message the presence of an identifier identifying  
10 one of the available processing systems;  
    and where the presence of the identifier is detected, forwarding the message  
to the processing system identified thereby via the appropriate connection;  
    otherwise determining a destination processing system for processing the  
message;  
15      inserting into the message an identifier identifying the determined destination  
processing system; and  
    forwarding the message to the processing system via the appropriate  
connection.
- 20 2. A method according to claim 1, wherein each message further includes a message  
identifier for identifying related messages, the method further comprising maintaining  
a database of message identifiers for which no destination identifiers was detected  
along with information indicating to which of the available processing systems each  
message was forwarded to.
- 25 3. A method according to claim 2, further comprising, where a message is received  
without a destination identifier, searching the database for a related message  
identifier and, where found, forwarding the message to the processing system  
identified therein.
- 30 4. A method according to any previous claim, further comprising removing entries in  
the database after a predetermined amount of time.

5. A method according to any previous claim, wherein the point-to-point connection is a transport control protocol (TCP) connection, and wherein the message is a session initiation protocol (SIP) message.
- 5 6. A method according to any previous claim, wherein the step of inserting further comprises inserting the destination identifier into an extension header of a SIP message.
7. A load-balancing element for routing a message conveyed in a stream through a point-to-point connection to one of a plurality of available processing systems each connected to the load-balancing element by separate point-to-point connections, comprising at the load-balancing element:
- 10 a message processor for extracting the message from the stream;  
a message analyzer for detecting in the received message the presence of an identifier identifying one of the available processing systems; and  
15 a message forwarder for forwarding the message to the processing system identified thereby via the appropriate connection.
8. A load-balancing element according to claim 7, further comprising, for when the presence of a destination identifier is not detected,
- 20 a load analyzer for determining a destination processing system for processing the message; and  
a message processor for inserting into the message a destination identifier identifying the determined destination processing system.
- 25 9. A load-balancing element according to claim 7 or 8, wherein each message further includes a message identifier for identifying related messages, and further comprising a database for storing details of message identifiers for which no destination identifier was detected along with information indicating to which of the available processing systems each message was forwarded to.
- 30 10. A load-balancing element according to claim 7, 8 or 9, further comprising, where a message is received without a destination identifier, means for searching the

database for a related message identifier and for identifying to which processing system the message should be forwarded.

11. A load-balancing element according to any of claims 7 to 10, adapted for use  
5 where each point-to-point connection is a transport control protocol (TCP) connection, and wherein the message is a session initiation protocol (SIP) message.
12. A load-balancing element according to any of claims 7 to 11, wherein the  
10 message processor is adapted for inserting the destination identifier into an extension header of a SIP message.
13. A session initiation protocol (SIP) network comprising elements according to any of claims 7 to 12.
- 15 14. A session initiation protocol (SIP) network operating in accordance with the method of any of claims 1 to 6.